

**In The Claims**

Please amend the claims as follows:

1. (Canceled).

2. (Canceled).

3. (Canceled).

4. (Canceled).

5. (Canceled).

6. (Canceled).

7. (Canceled).

8. (Canceled).

9. (Canceled).

10. (Canceled).

11. (Canceled).

12. (Canceled).

13. (Canceled).

14. (Canceled).

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Canceled).

21. (Canceled).

22. (Canceled).

23. (Canceled).

24. (Canceled).

25. (Canceled).

26. (Canceled).

27. (Canceled).

28. (Canceled).

29. (Canceled).

30. (Canceled).

31. (Canceled).

32. (Canceled).

33. (Canceled).

34. (Currently amended) A method of irradiating an article with an ~~optimal~~ amount of radiation between first and second limits where the second limit is greater than the first limit and where the first and second limits are greater than zero, including the steps of:

directing radiation to the article,

determining whether the article will be receiving an amount of radiation between the first limit and the second ~~upper~~ limit,

directing the radiation to the article when it is determined that the radiation in the article will be between the first limit and the second limit, and

reducing the intensity of the radiation directed to the article, when it is determined that the amount of radiation will be above the second limit, so that the reduced amount of radiation directed to the article will be between the first limit and the second limit.

35. (Original) A method as set forth in claim 34 wherein the radiation is directed only from a single position and wherein the intensity of the radiation directed to the article from the single position is reduced, when it is determined that the amount of radiation will be above the second limit, so that the reduced amount of the radiation directed from the single position will be between the first limit and the second limit.

36. (Original) A method as set forth in claim 34 wherein the article has first and second opposite sides and wherein the radiation is directed to the first and second opposite sides of the article and wherein the intensity of the cumulative amount of the radiation directed to the first and second opposite sides of the article is reduced, when it is determined that the cumulative amount of the radiation will be above the second limit, so that the reduced amount of the cumulative radiation directed to the first and second opposite sides of the article will be between the first limit and the second limit.

37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Canceled)

41. (Canceled)

42. (Canceled)

43. (Canceled)

44. (Canceled)

45. (Canceled)

46. (Canceled)

47. (Currently amended) A system for irradiating an article with an optimal amount of radiation, comprising regardless of the thickness of the article, including a radiation source for irradiating the article, and a microprocessor for determining whether the intensity of the irradiation of the article ~~by the radiation from the source~~ will be between a first limit of ~~intensity~~ and a second limit of ~~intensity~~ where the first and second limits are different from zero and where the second limit is greater than the first limit, and a member responsive to the determination by the microprocessor for reducing the intensity of the radiation from the source to a value between the first limit and the second limit when the microprocessor determines that the intensity of the ~~irradiation~~ of the article ~~by the radiation from the source~~ will be greater than the second limit intensity.

48. (Currently amended) A system as set forth in claim 47 wherein the microprocessor does not provide for a provides for no reduction in the intensity of the irradiation of the article by the source when the microprocessor

determines that the intensity of the irradiation is between the first and second limits.

49. (Original) A system as set forth in claim 47 wherein  
the radiation is directed only from a single position and wherein  
the intensity of the radiation directed to the article from the single position is  
reduced when it is determined that the amount of radiation will be above the second  
upper limit, so that the reduced amount of the radiation directed from the single position  
will be between the first lower limit and the second limit.

50. (Original) A system as set forth in claim 47 wherein the article has first  
and second opposite sides and wherein

the radiation is directed to the first and second opposite sides of the article and  
wherein  
the cumulative intensity of the radiation directed to the first and second opposite  
sides of the article is reduced, when it is determined that the cumulative amount of the  
radiation will be above the second limit, so that the reduced amount of the radiation  
cumulatively directed to the first and second opposite sides of the article will be between  
the first limit and the second limit.